Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1.   (Currently Amended) A server-client network system for a genotyping analysis on a target sample, the server-client network system comprising:

a ~~computer-based~~ server including an analysis algorithm database storing a plurality of analysis algorithms for the genotyping analysis; and

a client system communicatively coupled to the ~~computer-based~~ server, the client system performing:

receiving results of a biochip test on the target sample,

identifying a biochip used on the target sample~~detecting a biochip identifier~~,

selecting an analysis algorithm from the analysis algorithm database for the identified biochip~~relevant to the biochip identifier~~,

downloading the selected analysis algorithm from the analysis algorithm database, ~~and~~

performing the genotyping analysis on the target sample using the downloaded analysis algorithm, ~~and~~

storing results of the genotyping analysis in the client system, and

outputting the results of the genotyping analysis to a user at the client system via a graphical user interface of the client system;

wherein the selected analysis algorithm is established using statistical data for results of performing testing on a number of patient and reference samples using the biochip.

2.   (Previously Presented) The server-client network system of claim 1, further comprising:

a biochip identifier and layout database storing information on an identifier and layout of the biochip; and

a quality control criteria database;

wherein the biochip identifier and layout database and the quality control criteria database are accessed by the client system for performing the genotyping analysis on the target sample.

3.   (Currently amended) The server-client network system of claim 2, wherein the biochip identifier and layout database and the quality control criteria database -are built up from the statistical data for results of tests on a number of patient and reference samples using the biochip.

4.   (Currently amended) The server-client network system of claim 1, wherein the analysis algorithm database is built up from statistical data for the results of tests on a number of patient and reference samples using the biochip.

5.   (Previously Presented) The server-client network system of claim 1, wherein the client system comprises:

an optical scanning system through which the results of the biochip test on the target sample are received; and

an identifier recognizer which recognizes an identifier of the biochip.

6.   (Currently Amended) The server-client network system of claim 1, wherein the client system comprises an engine performing logical functions including:

detecting an identifier of the biochip;

selecting databases corresponding to the identifier of the biochip;

selecting a database position mode from between a server mode and a local replication mode;

downloading the databases corresponding to the identifier of the biochip from the computer based server if the local replication mode is selected and it is determined that the databases do not exist in the client system; and

performing a genotyping analysis on the target sample with reference to the downloaded databases if the local replication mode is selected or performing a genotyping analysis on the

target sample with reference to the databases stored in the <u>computer-based</u> server if the server mode is selected.

7. (Currently Amended) The server-client network system of claim 1, wherein the client system comprises an engine performing logical functions including:

detecting the identifier of the biochip;

selecting databases corresponding to the identifier of the biochip;

selecting a database position mode from between a server mode and a local replication mode;

downloading the databases corresponding to the identifier of the biochip from the <u>computer-based</u> server if the local replication mode is selected and it is determined that the databases do not exist in the client system; and

performing a genotyping analysis on the target sample with reference to the downloaded databases if the local replication mode is selected or performing a genotyping analysis on the target sample with reference to the databases stored in the <u>computer-based</u> server if the server mode is selected.

8. (Previously presented) The server-client network system of claim 7, wherein the performing a genotyping analysis on the target sample comprises:

reading the biochip identifier and layout database;

reading the results of the test on the target sample input via an optical scanning system;

linking the results of the test on the target sample to spot position information stored in the biochip identifier and layout database;

reading the quality control criteria database;

screening out failed spots from among the results of the biochip test based on the quality control criteria database;

reading the analysis algorithm database;

performing the genotyping analysis on the target sample with reference to the analysis algorithm database; and

storing and/or displaying the results of the genotyping analysis.

9.   (Currently Amended) A computer readable medium for a server-client network system for genotyping analysis, the computer readable medium including computer executable instructions for ~~causing~~ a client system to perform logical operations comprising:

receiving results of a biochip test on a target sample;

identifying a biochip used on the target sample~~detecting a biochip identifier~~;

selecting an analysis algorithm from an analysis algorithm database for the identified biochip~~relevant to the biochip identifier~~;

downloading the selected analysis algorithm ~~relevant to the biochip identifier~~ from [[an]] the analysis algorithm database stored on a computer-based server, the analysis algorithm database storing a plurality of analysis algorithms for the genotyping analysis; and

performing the genotyping analysis on the target sample using the downloaded analysis algorithm, ~~and~~

storing results of the genotyping analysis in the client system, and

outputting the results of the genotyping analysis to a user at the client system via a graphical user interface of the client system;

wherein the selected analysis algorithm is established using statistical data for results of performing testing on a number of patient and reference samples using the biochip.

10.   (Currently Amended) The computer readable medium of claim 9, wherein performing the genotyping analysis further includes:

accessing a biochip identifier and layout database stored in the computer-based server, the biochip identifier and layout database storing information on an identifier and layout of the biochip; and

accessing a quality control criteria database stored on the computer-based server.

11.   (Currently Amended) The computer readable medium of claim 10, further comprising instructions for performing:

detecting the identifier of the biochip;

selecting databases corresponding to the identifier of the biochip;

selecting a database position mode from between a server mode and a local replication mode; and

downloading the databases corresponding to the identifier of the biochip from the computer-based server if the local replication mode is selected and it is determined that the databases do not exist in the client system, and

wherein the performing the genotyping analysis comprises:

reading the biochip identifier and layout database from among the databases stored in the computer-based server if the server mode is selected or reading a biochip identifier and layout database from among the downloaded databases if the local replication mode is selected;

reading the results of the biochip test on the target sample input via an optical scanning system;

linking the results of the biochip test on the target sample to spot position information stored in the biochip identifier and layout database;

reading the quality control criteria database;

screening out failed spots from among the results of the biochip test based on the quality control criteria database;

reading the analysis algorithm database;

performing a genotyping analysis on the target sample based on the analysis algorithm database; and

storing and/or displaying the results of the genotyping analysis.

12.   (Currently Amended) A method of performing a genotyping analysis on a target sample, the method comprising:

a client system receiving results of a biochip test on the target sample ~~using a biochip~~;

identifying a biochip used on the target sample~~detecting a biochip identifier~~;

selecting an analysis algorithm from an analysis algorithm database for the identified biochip~~relevant to the biochip identifier~~;

the client system downloading the selected analysis algorithm ~~relevant to the biochip identifier~~ from [[an]] the analysis algorithm database stored on a computer-based server, the analysis algorithm database storing a plurality of analysis algorithms for the genotyping analysis;

the client system performing the genotyping analysis on the target sample using the downloaded analysis algorithm; ~~and~~

the client system storing results of the genotyping analysis in the client system; and

the client system outputting the results of the genotyping analysis to a user at the client system via a graphical user interface of the client system;

wherein the selected analysis algorithm is established using statistical data for results of performing testing on a number of patient and reference samples using the biochip.

13.   (Currently amended) The method of claim 12, wherein performing the genotyping analysis further includes:

the client system accessing a biochip identifier and layout database stored on the computer-based server, the biochip identifier and layout database storing information on the identifier and layout of the biochip; and

the client system accessing a quality control criteria database stored on the computer-based server.

14.   (Currently amended) The method of claim 13, further comprising :

<u>an engine of the client system performing:</u>

detecting the identifier of the biochip;

selecting databases corresponding to the identifier of the biochip;

selecting a database position mode from between a server mode and a local replication mode; and

downloading the databases corresponding to the identifier of the biochip from the <u>computer-based</u> server if the local replication mode is selected and it is determined that the databases do not exist in the client system; and

wherein the performing the genotyping analysis comprises:

reading the biochip identifier and layout database from among the databases stored in the <u>computer-based</u> server if the server mode is selected or reading a biochip identifier and layout database from among the downloaded databases if the local replication mode is selected;

reading the results of the biochip test on the target sample input via an optical scanning system;

linking the results of the biochip test on the target sample to spot position information stored in the biochip identifier and layout database;

reading the quality control criteria database;

screening out failed spots from among the results of the biochip test based on the quality control criteria database;

reading the analysis algorithm database;

performing a genotyping analysis on the target sample based on the analysis algorithm database; and

storing and/or displaying the results of the genotyping analysis.